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Please find below and/or attached an Office communication concerning this application or proceeding.

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte ANAND D. SANKRUTHI

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Appeal 2008-005640
Application 10/760,348
Technology Center 2100

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Before JOHN A. JEFFERY, LANCE LEONARD BARRY, and
ST. JOHN COURTENAY III, *Administrative Patent Judges.*

COURTENAY, *Administrative Patent Judge.*

DECISION ON APPEAL[1]

STATEMENT OF THE CASE

Appellant seeks our review under 35 U.S.C. § 134 of the Examiner's final decision rejecting claims 1-16. We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We affirm.

INVENTION

Appellant's invention relates to methods, apparatus and systems for the management of storage devices. In this sense, storage devices can be abstracted to the concept of Logical Units (LUNs) examples of which include individual Hard Disks (HDDs) and arrays of HDDs. More particularly, the invention on appeal is directed to methods and apparatus for determining the volume type for volumes on computer LUNs where the computer is running the Windows operating system or a variant thereof. (Spec. 1).

ILLUSTRATIVE CLAIM

Claim 1 is illustrative:

> 1.   A method of determining volume types present on a storage device, the method including the steps of determining superficial specifying characteristics of a volume on the storage device and correlating the superficial specifying characteristics against one or more previously determined volume characteristics thereby inferring a method used for writing data onto the volume.

PRIOR ART

Kim	US 2003/0023811 A1	Jan. 30, 2003
Cabrera	US 6,553,387 B1	Apr. 22, 2003
Mason	US 6,611,896 B1	Aug. 26, 2003

REJECTIONS

Appellant appeals the following rejections:

1. The Examiner rejected claims 1-8, 13, 15, and 16 under 35 U.S.C. § 102(e) as anticipated by Kim.

2. The Examiner rejected claim 9 under 35 U.S.C. § 103(a) as unpatentable over the combination of Kim and Mason.

3. The Examiner rejected claims 10-12 and 14 under 35 U.S.C. § 103(a) as unpatentable over the combination of Kim and Cabrera.

ISSUES

Based upon our review of the administrative record, we have determined that the following issues are dispositive in this appeal:

1. Did the Examiner err in finding under § 102 that Kim discloses "correlating the superficial specifying characteristics against one or more previously determined volume characteristics thereby inferring a method used for writing data onto the volume," as recited in claim 1?

2. Did the Examiner err in finding under § 103 that the combination of Kim and Cabrera would have taught or

suggested identifying the volume type as either raid or
striped, within the meaning of independent claim 12? (*See*
Appellant's argument p. 7 of the principal Brief).

FACTUAL FINDINGS

1. Kim discloses the RAID-0 type of RAID (Redundant Array of
   Independent Disks) where striping is used. (para. [0010]).
2. Kim discloses the RAID-1 type of RAID (i.e., disk mirroring) where
   no striping is used. (para. [0011]).
3. Kim's Figure 3 depicts a metadata table that is stored in each disk
   partition constructing one logical volume. (para. [0083]). The
   metadata table of Figure 3 includes a Logical Volume Map 72.
4. Kim's Figure 5 depicts Logical Volume Map 72 that further includes
   a stripe size 97 for representing the size of stripe in case a
   corresponding volume has striping type, and a raid level 98 for
   representing the constructing type of the corresponding volume. (para.
   [0102]).
5. Kim discloses that Stripe Size 97 represents the size of stripe in case
   the corresponding volume has a striping type. (para. [0102]; Fig. 5).

Grouping of Claims

Appellant argues claims 1-8, 13, and 15-16 as a group (App. Br. 4-6).
We select representative claim 1 to decide the appeal for this group. *See* 37
C.F.R. § 41.37(c)(1)(vii).

Appellant argues independent claim 12 separately. (App. Br. 6-7).
We address claim 12 separately *infra*.

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ANALYSIS

Issue 1

We decide the question of whether the Examiner erred in finding under § 102 that Kim discloses "correlating the superficial specifying characteristics against one or more previously determined volume characteristics thereby inferring a method used for writing data onto the volume," as recited in claim 1.

Appellant particularly contends that the aforementioned limitations are not disclosed by Kim because "[n]o correlation or inference is made by the method taught in Kim." (App. Br. 5). Instead, Appellant contends that "Kim teaches that the raid level is obtained by accessing the volume created by [the] Logical Volume Manager." (*Id.*). In the Reply Brief (filed July 20, 2007) Appellant essentially restates the same argument: "[A]s illustrated in [Kim's] FIGS. 10 and 11, in order to determine the raid level 98 of a logical volume, the logical volume map, stored in a disk partition, is read <u>directly</u>. (*See* ¶[0125].)" (Reply Br. 2).

The Examiner contends that the claims do not preclude using a Logical Volume Manager (as disclosed by Kim, FF 4) to (directly) access the RAID level (i.e., correlating the "superficial specifying characteristics" which infers the method used for writing data onto the volume). (Ans. 11). The Examiner finds that when Kim's "RAID level is read directly, the method of writing to the logical volume is inferred based on the RAID level." (*Id.*).

We begin our analysis by observing that Appellant has not argued a particular interpretation or definition for the claimed "superficial specifying

characteristics" in the Briefs. Therefore, we broadly but reasonably construe the claimed "superficial specifying characteristics" as reading on *any* characteristics of a volume on a storage device.[2] We also particularly note that Appellant's imputed negative limitation of *no direct reading* is not recited in the language of representative claim 1. (*See* Reply Br. filed July 20, 2007, ¶2, pg. 2). Therefore, we find Appellant's arguments are not commensurate with the broad scope of representative claim 1.[3] On this record, we find that Kim's logical volume map metadata (FF 3-4) such as the volume name 94 or volume ID 92 (Fig. 5) (i.e., "superficial specifying characteristics") is correlated with a previously determined volume characteristic (i.e., RAID LEVEL 98, FF 4) to infer (from the particular RAID type, *see* FF 1-2) the method used for writing data onto the volume, as claimed. Therefore, we sustain the Examiner's anticipation rejection of

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[2] Because "applicants may amend claims to narrow their scope, a broad construction during prosecution creates no unfairness to the applicant or patentee." *In re ICON Health and Fitness, Inc.*, 496 F.3d 1374, 1379 (Fed. Cir. 2007) (citing *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004)).
[3] "Though understanding the claim language may be aided by the explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment." *Superguide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004) (citation omitted). Thus, "each claim does not necessarily cover every feature disclosed in the specification. When the claim addresses only some of the features disclosed in the specification, it is improper to limit the claim to other, unclaimed features." *Ventana Med. Sys., Inc. v. Biogenex Labs., Inc.*, 473 F.3d 1173, 1181 (Fed. Cir. 2006) (citation omitted).

representative claim 1, and claims 2-8, 13, 15, and 16 which fall therewith. *See* 37 C.F.R. § 41.37(c)(1)(vii).

Claims 9-11 and 14

Appellant contends that claims 9-11 and 14 depend from one of independent claims 1 or 13 and are allowable for the same reasons previously argued for claims 1 and 13. (App. Br. 6). Appellant further contends that neither Mason nor Cabrera cures the deficiencies of Kim. (*Id.*).

In response, we find no deficiencies with Kim for the same reasons discussed *supra* regarding claim 1. Therefore, we sustain the Examiner's § 103 rejection of dependent claims 10, 11, and 14 over Kim and Cabrera. For the same reason, we also sustain the Examiner § 103 rejection of dependent claim 9 over Kim and Mason.

Issue 2
Independent claim 12

We decide the question of whether the Examiner erred in finding under § 103 that the combination of Kim and Cabrera would have taught or suggested identifying the volume type as either raid or striped, within the meaning of independent claim 12.

We begin our analysis by noting that Appellant acknowledges that Kim's Figure 5 depicts a logical volume map containing a stripe size and a raid level. (App. Br. 7, l. 3). We agree, as we find these features are clearly shown in Kim's Figure 5. (FF 4). Therefore, we find no support for Appellant's subsequent assertion that "Kim, does not disclose, teach or

suggest 'identifying the volume type as either 'raid' or 'striped' as claimed in claim 12." (App. Br. 7, ¶1).

We find at least Kim's RAID LEVEL 98 (Fig. 5) indicates whether a volume type is RAID, i.e., any RAID level including non striped RAID-1 (mirrored) or striped RAID-0. (*See* FF 1-2). Thus, we find Kim's RAID level alone teaches or suggests identifying the volume type as either "raid" or "striped." (*Id.*). Moreover, Kim expressly discloses that Stripe Size 97 represents the size of stripe in case the corresponding volume has a striping type. (FF 5). For these reasons, we sustain the Examiner's § 103 rejection of independent claim 12 over Kim and Cabrera.

DECISION

We affirm the Examiner's § 102 rejection of claims 1-8, 13, 15, and 16.

We affirm the Examiner's § 103 rejections of claims 9-12 and 14.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

ORDER

AFFIRMED

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